CLAIMS:

1. A chemical gas generator comprising a generating device for producing gas by chemical reaction, the device being at least partly enclosed within thermal insulating means comprising a vacuum jacket.

2. A generator as claimed in claim 1, which generates oxygen.

3. A generator as claimed in claim 2, wherein the device comprises a metal chlorate or perchlorate, in admixture with a catalyst and a fuel.

4. A generator as claimed in claim 3, wherein the device comprises sodium chlorate, manganese dioxide, and iron.

5. A generator as claimed in any of claims 1 to 4 which comprises ignition means.

6. A generator as claimed in any one of claims 1 to 5, wherein the device comprises mechanically drivable ignition means.

7. A generator as claimed in claim 6, wherein the ignition means comprises spark generating means.

8. A generator as claimed in claim 7, wherein the spark generating means comprises a friction member.

9. A generator as claimed in claim 6 or claim 7, wherein the spark generating means comprises a friction wheel and flint.

10. A generator as claimed in any of claims 7 to 9, wherein the ignition means also comprises means for abrading a surface of the generating device in the region of ignition.

11. A generator as claimed in any of claims 1 to 4, wherein the device comprises electrically powered ignition means.

12. A generator as claimed in any of claims 1 to 11, wherein the material of the generating device in the region of ignition comprises an oxidizing agent.

13. A generator as claimed in claim 12, wherein the oxidizing agent is potassium permanganate.

14. A generator as claimed in any one of claims 1 to 13, having ignition means located in a central region of the device.

15. A generator as claimed in claim 14, wherein the generating device is arranged to sustain during operation propagation of a plurality of burn fronts therethrough, the fronts propagating in generally different directions.

16. A generator as claimed in claim 15, wherein in operation there are two burn fronts travelling in opposite directions.

17. A generator as claimed in any of claims 1 to 16, wherein the vacuum jacket vessel is of stainless steel.

18. A generator as claimed in any one of claims 1 to 17, wherein the pressure in the interior of the vacuum jacket is in the range of from 10^{-7} to 10^{-5} mbar.

19. A chemical gas generator comprising a generating device for producing gas by chemical reaction, the device comprising mechanically driven spark generating ignition means.

20. A generator as claimed in claim 19, wherein the ignition means is located in a central region of the device.

21. A generator as claimed in claim 20, wherein the generating device is arranged to sustain during operation propagation of a plurality of burn fronts therethrough, the fronts propagating in generally different directions.

22. A generator as claimed in claim 21, wherein in operation there are two burn fronts travelling in opposite directions.

23. A generator as claimed in any of claims 19 to 22, wherein the spark generating means comprises a friction member.

24. A generator as claimed in any of claims 19 to 23, wherein the spark generating means comprises a friction wheel and flint.

25. A generator as claimed in any of claims 19 to 24, wherein the ignition means also comprises means for abrading a surface of the generating device in the region of ignition.

26. A generator as claimed in any one of claims 1 to 25, wherein the device is in the form of a cylinder having a cross-section of a major segment of a circle.

27. A generator as claimed in claim 26, wherein the ignition means is positioned close or adjacent to the flat surface of the cylinder.

28. A generator as claimed in claim 1, substantially as described with reference to, and illustrated by, any one or more of the accompanying drawings.

29. A generator as claimed in claim 1, substantially as described in either of the Examples herein.

30. Any new or novel feature, or any new or novel combination of features, hereinbefore described.